

Abstract

A semiconductor memory device includes a nonvolatile memory section; and a volatile memory section, wherein the
5 nonvolatile memory section includes a nonvolatile memory cell having a gate electrode formed on a semiconductor layer via a gate insulating film, a channel region disposed under the gate electrode, diffusion regions disposed on both sides of the channel region and having a conductive type opposite
10 to that of the channel region, and memory functional units formed on both sides of the gate electrode and having a function for retaining charges.